



A Rare Cause of Left Lower Quadrant Pain at a Rare Localization of Colon: Primary Acute Epiplonic Appendagitis of Descendant Colon

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Abstract

Primary epiplonic appendagitis (PEA) refers to inflammation in the appendix epiploica caused by spontaneous torsion, a hemorrhagic infarct. In general, PEA is a self-limiting disease, and most patients recover with conservative treatment in less than 10 days. Slightly male predominance is seen in PEA. The most common sites of acute PEA, in order of decreasing frequency, are sigmoid colon, the descending colon and the right hemicolon. This paper presents the clinical and radiological findings of a young adult male with complaints of abdominal left lower quadrant pain. The importance of differential diagnosis with diagnostic value of radiological methods is emphasized.

Keywords: Appendix Epiploica, descending colon, computed tomography, ultrasonography

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Introduction

Appendix epiploica are small pouches of peritoneum filled with fat and small vessels that attach to the serosal surface of the colon by a vascular stalk [1,2]. They extend from cecum to the rectosigmoid junction and are covered by the peritoneum [3]. They exist in the rectosigmoid junction (57%), ileocecal region (26%), ascending colon (9%), transverse colon (6%), and descending colon (2%) [4]. Primary epiploic appendagitis (PEA) refers to inflammation of appendix epiploica caused by either spontaneous torsion or a hemorrhagic infarct [5]. Their limited blood supply, pedunculated shapes and heavy exercise of the individual make the appendix epiploica prone to torsion and also ischemic or hemorrhagic infarct resulting in the inflammation of the surrounding tissues [2,3]. Secondary epiploic appendagitis is associated with inflammation of adjacent organs, such as diverticulitis, appendicitis, or cholecystitis [4]. PEA should be distinguished from secondary epiploic appendagitis caused by these adjacent inflammatory processes [6]. In this paper, we present a case of PEA with an uncommon localization in the descendant colon.

Case:

A 31-year-old male was admitted to our emergency department with complaints of sudden onset left lower quadrant abdominal pain. Physical examination revealed localized left lower quadrant tenderness and rebound. Blood parameters was normal. With presumptive prediagnosis of diverticulitis, abdominal ultrasound was performed firstly. US revealed a hyperechoic adipose structure in the left lower quadrant paracolic region with a surrounding hypoechoic line (Figure 1). This finding was consistent with epiploic appendagitis. In order to confirm the diagnosis and distinguish the primary and secondary forms of epiploic appendagitis a CT scan was performed after IV contrast media injection. CT evaluation revealed 2 fatty structures on the surface of descendant colon surrounded by a contrast enhancing hyperdens rim which represented the thickened visceral peritoneum (Figure 2). No additional finding was observed on CT. Diagnosis of PEA was confirmed and the patient was discharged after planning conservative analgesic and anti-inflammatory treatment. The patient was also advised for readmission in case of no recovery in the symptoms within a few days. Fortunately, in the control examination 3 days after discharge the complaints of pain and

tenderness resolved markedly. Besides, sonographic findings of the disease was observed to disappear completely on follow-up US performed 3 months after discharge.

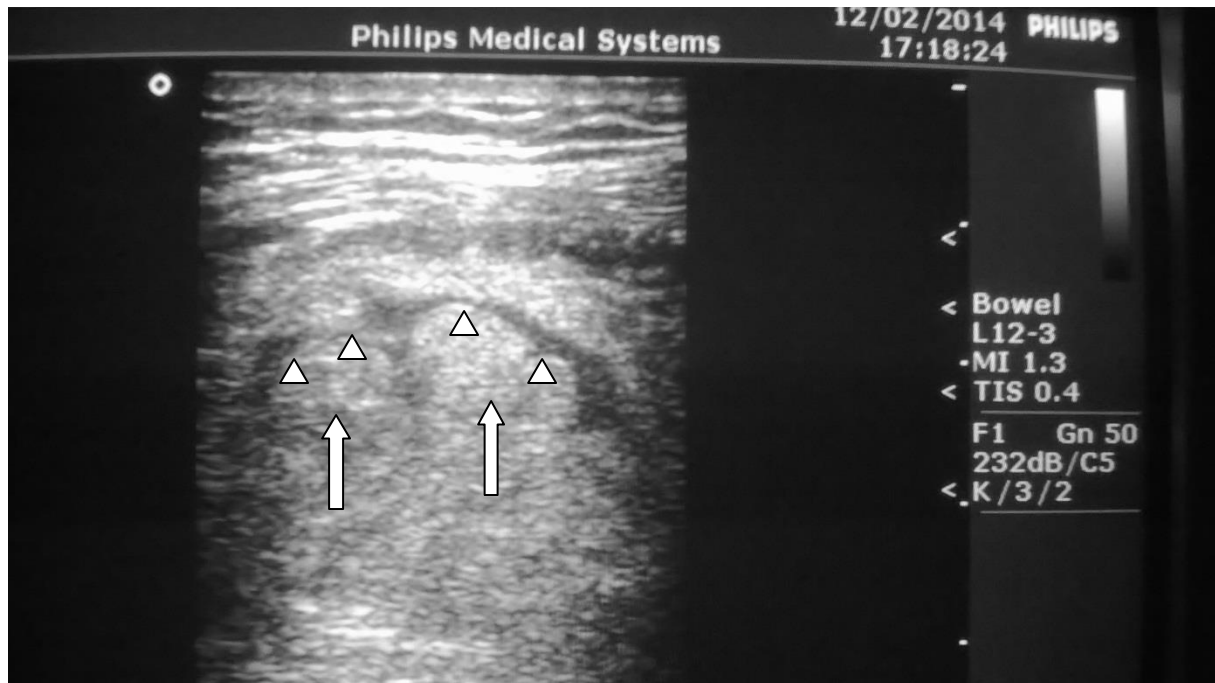


Figure 1. Ultrasonography demonstrated a hyperchoic structure (arrows) with surrounding hypoechoic line corresponding to thickened visceral peritoneum (arrow heads).



Figure 2. Axial CT showed an inflamed oval area of fat attenuation adjacent to descendant colon in the left lower quadrant with periferal contrast enhancement (arrow).

Discussion

The appendix epiploica are fat-containing peritoneal outpouches that attach to the serosal surface of the colon by a vascular stalk. Their sizes are usually 1-2 cm in thickness and 0.5-5 cm in length. Approximately 50-100 appendix epiploica exist from the cecum to the rectosigmoid junction [5]. Epiploic appendagitis has primary and secondary forms. PEA is thought to be an inflammatory condition that arise primarily from a torsion resulting ischemia and infarction with aseptic fat necrosis, spontaneous venous thrombosis, and is a localized sterile inflammation in the involved epiploic appendage [6]. It must be distinguished from the secondary epiploic appendagitis, which is caused by neighborhood inflammatory processes such as diverticulitis, appendicitis or cholecystitis. This means that epiploic appendagitis may also accompany some other surgery requiring conditions like appendicitis [7]. We observed no additional intraabdominal inflammatory process accompanying epiploic appendagitis in our

case. PEA can occur at any age but has a peak incidence in the fourth and fifth decades. There may be a slight male predilection. The most common sites of acute epiploic appendagitis, in order of decreasing frequency, are areas adjacent to the sigmoid colon, the descending colon and the right hemicolon [8].

Diagnosis of PEA without radiological techniques is quite difficult because it has many nonspecific clinical features such as well-localised abdominal pain and rebound tenderness which can also be seen in a case requiring surgery. Therefore the common presumptive clinical diagnosis for patients with PEA before radiologic interventions was either diverticulitis or appendicitis according to the affected region of the colon [1,2]. Routine laboratory parameters may be within normal limits except sometimes slightly elevated C-reactive protein and neutrophile leucocytes [7]. The presenting symptom of our case was the left lower quadrant pain suggesting the presumptive diagnosis of acute diverticulitis and the routine laboratory examinations were found normal.

During the last few years with the introduction of cross-sectional imaging and the increasing use of abdominal CT scans for primary evaluation of abdominal pain, the recognition of PEA is increasing [7]. CT is the diagnostic modality of choice for patients with suspected PEA because PEA has a characteristic appearance on CT [9,10]. The most common CT feature in acute epiploic appendagitis is an oval hypodense lesion less than 5 cm in diameter (typical diameter range, 1.5–3.5 cm) that has attenuation equivalent to that of fat, that abuts the anterior colonic wall, and that is surrounded by inflammatory changes [10]. These fat-containing lesions often show periferal contrast enhancement after intravenous contrast media administration. Similarly, in our case the fatty lesion in the left lower quadrant had enhanced periferally on CT examination. On the other hand, abdominal ultrasound in experienced hands has revealed PEA in an increasing number of patients [7]. Typical ultrasound finding is hyperechoic noncompressible mass with surrounding hypoechoic rim and having no central flow on color Doppler imaging and near the colonic wall at the site of tenderness on physical examination. Central avascularity of the mass is the distinguishing feature of itself from other inflammatory processes such as diverticulitis or appendicitis [6,11].

Conservative management such as pain control and supressing inflammation with non-steroidal anti-inflammatory drugs usually provides dramatic recovery within few days in the symptoms

of PEA [2]. However, radiological findings regress within 6 months. In our case, outpatient therapy with a nonsteroidal antiinflammatory drug was initiated and 2 days after discharge, the complaints of the patient resolved. In the control examination 3 months after first admission, we performed US as the patient refused the control CT evaluation and US revealed normal findings.

Conclusion

Awareness of the characteristic findings of epiploic appendagitis on CT and US allows a successful outpatient treatment with appropriate diagnosis avoiding surgery and unnecessary additional costs. Patients usually recover with conservative non-surgical treatment, with anti-inflammatory drugs. Surgical treatment is only advised in the patients of which the symptoms fail to resolve within few days. Despite US reveals typical findings of epiploic appendagitis, final diagnosis always has to be made by contrast enhanced CT in order to distinguish primary and secondary forms of epiploic appendagitis. It should be kept in mind that secondary epiploic appendagitis may be seen either due to acute appendicitis and therefore requires surgery or due to diverticulitis and cholecystitis which requires antibiotherapy.

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